EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	130866	pain or spasticity	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:16
L2	2289	sildenafil	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:16
L3	929	l1 and l2	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:16
L4	38	l1 with l2	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2007/01/19 15:26
L5	101	spinal adj cord adj pain or spinal adj cord adj spasticity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/01/19 15:27
L6	21	l2 and l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/01/19 15:28
L7	146	cGMP adj PDE5 adj inhibitor	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2007/01/19 15:28
L8	0	l5 and l7	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:29
L9	101	l1 and l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:29
L10	101	l1 same l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2007/01/19 15:29
L11	101	l1 same l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2007/01/19 15:29

EAST Search History

L12	101	l1 with l5	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2007/01/19 15:29
L13	72	l1 and l7	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2007/01/19 15:29
L14	25	l1 same l7	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2007/01/19 15:29
S1	107	cGMP adj PDE5 adj inhibitor	US-PGPUB; USPAT; EPO; DERWENT	ADJ	OFF	2006/08/14 15:21
S2	114085	pain	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/14 15:21
S3	57	S1 and S2	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/14 15:28
S4	6253	spinal adj cord adj injury	US-PGPUB; USPAT; EPO; DERWENT	ADJ	OFF	2006/08/14 15:29
S5	35	S1 and S4	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/14 15:31
S6	2032	sildenafil	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/14 15:31
S8	476	S2 and S6 @py<="2004"	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/14 15:33
S9	60	S4 and S6 @py<="2004"	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/16 10:33
S10	8721	spinal with cord with injury	US-PGPUB; USPAT; EPO; DERWENT	WITH	OFF	2006/08/16 10:34

EAST Search History

S11	107	cGMP adj PDE5 adj inhibitor	US-PGPUB; USPAT; EPO; DERWENT	ADJ	OFF	2006/08/16 10:34
S12	36	S11 and S10	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/16 10:40
S13	2068	sildenafil or tadalafil or vardenafil	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/08/16 10:41
S14	170	S13 and S10	US-PGPUB; USPAT; EPO; DERWENT	AND	OFF	2006/08/16 10:41

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FILE LAST UPDATED: 18 Jan 2007  (20070118/ED)

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=> s sildenafil
          1795 SILDENAFIL
             2 SILDENAFILS
L1        1795 SILDENAFIL
                  (SILDENAFIL OR SILDENAFILS)

=> s pain or spasticity
         48032 PAIN
          1199 PAINS
         48836 PAIN
                  (PAIN OR PAINS)
           890 SPASTICITY
             4 SPASTICITIES
           892 SPASTICITY
                  (SPASTICITY OR SPASTICITIES)
L2       49468 PAIN OR SPASTICITY

=> s spinal(a)cord
         65697 SPINAL
            10 SPINALS
         65703 SPINAL
                  (SPINAL OR SPINALS)
         69618 CORD
         11608 CORDS
         72912 CORD
                  (CORD OR CORDS)
L3       41746 SPINAL(A)CORD

=> s l2 and l3
L4        5628 L2 AND L3

=> s l1 and l4
L5           7 L1 AND L4
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L5 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:499667 CAPLUS
DOCUMENT NUMBER: 145:369678
ENTRY DATE: Entered STN: 29 May 2006
TITLE: Sildenafil induces hyperalgesia via activation of the NO-cGMP pathway in the rat neuropathic pain model
AUTHOR(S): Patil, C. S.; Padi, S. V.; Singh, V. P.; Kulkarni, S. K.
CORPORATE SOURCE: Pharmacology Division, University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, 160 014, India
SOURCE: Inflammopharmacology (2006), 14(1-2), 22-27
CODEN: IAOAES; ISSN: 0925-4692
PUBLISHER: VSP
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 1-11 (Pharmacology)
ABSTRACT:
Persistent stimulation of nociceptors and C-fibers by tissue injury causes hyperalgesia and allodynia by sensitization of nociceptors and facilitation of synaptic transmission in the spinal cord. The important participant in the inflammatory response of injured peripheral nerve may be nitric oxide (NO). The aim of the present study was to test the sensitivity of PDE5 inhibitor sildenafil in chronic constriction injury (CCI) model a rat model of neuropathic pain. Sciatic nerve injury is associated with development of hyperalgesia 14 days after the nerve ligation. ***Sildenafil*** (100 and 200 μg/rat, i.t.) produced a significant decrease in pain threshold, which in lower dose did not alter the nociceptive threshold. The hyperalgesic effect of sildenafil was blocked by L-NAME and methylene blue (MB), which on per se treatment showed antinociceptive effect in nerve ligated rats. The results from the present study indicated that the major activation of NO-cGMP pathway in the chronic constriction injury model of neuropathic pain. The aggravation of hyperalgesic response might be due to the increased cGMP levels resulting in PKG-I activation and its upregulation.

SUPPL. TERM: PDE5 inhibitor sildenafil hyperalgesia neuropathy sciatic nerve pain
INDEX TERM: Analgesics
(PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in sciatic nerve injury model of rat)
INDEX TERM: Pain
(PDE5 inhibitor, sildenafil produced significant decrease in pain threshold but in lower dose did not affect nociceptive threshold in chronic constriction injury model of rat)
INDEX TERM: Pain
Skin, disease
(allodynia; PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in mech. and cold allodynia in sciatic nerve injury model of rat)
INDEX TERM: Pain
(hyperalgesia; PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in sciatic nerve injury model of rat)
INDEX TERM: Nerve, disease
(neuropathy; PDE5 inhibitor, sildenafil by

activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in neuropathic pain model of rat)

INDEX TERM: Nerve
(sciatic; PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in sciatic nerve injury model of rat)

INDEX TERM: 7665-99-8, CGMP 9068-52-4, PDE5
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in sciatic nerve injury model of rat)

INDEX TERM: 139755-83-2, Sildenafil
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia in sciatic nerve injury model of rat)

INDEX TERM: 10102-43-9, Nitric oxide, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(PDE5 inhibitor, sildenafil by activation of NO-cGMP pathway increases net cGMP levels causing hyperalgesia which apparently involves PKG-I activation and upregulation whereas cGMP-induced antinociception was PKG dependent in CCI rat model)

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):

(1) Aley, K; J Neurosci 1998, V18, P7008 CAPLUS
(2) Arner, S; Pain 1988, V33, P11 MEDLINE
(3) Backonja, M; Curr Pain Headache Rep 2004, V8, P212
(4) Basbaum, A; Pain 1991, V47, P359 MEDLINE
(5) Bennett, G; Pain 1988, V33, P87 MEDLINE
(6) Cahusac, P; Neuropharmacology 1984, V23, P719 CAPLUS
(7) Cizkova, D; Brain Res Bull 2002, V58, P161 CAPLUS
(8) Devor, M; Neuroreport 1992, V3, P21 CAPLUS
(9) Dubner, R; Trends Neurosci 1992, V15, P96 CAPLUS
(10) Fesenko, E; Nature 1985, V313, P310 CAPLUS
(11) Gracely, R; Pain 1992, V51, P175 MEDLINE
(12) Holthusen, H; Pain 1997, V69, P87 CAPLUS
(13) Inoue, T; J Neurol Sci 1997, V153, P1 CAPLUS
(14) Kawabata, A; Br J Pharmacol 1993, V109, P73 CAPLUS
(15) Khan, S; Curr Opin Drug Discov Devel 2003, V6, P658 CAPLUS
(16) Knowles, R; Proc Natl Acad Sci USA 1989, V86, P5159 CAPLUS
(17) Lin, Y; Proc Natl Acad Sci USA 2004, V101, P7799 CAPLUS
(18) Luo, Z; Curr Rev Pain 2000, V4, P459 MEDLINE
(19) MacFarlane, B; Pharmacol Ther 1997, V75, P1 CAPLUS
(20) Malmberg, A; Pain 1993, V54, P291 CAPLUS
(21) McCleane, G; Expert Opin Pharmacother 2004, V5, P1299 CAPLUS
(22) Meller, S; Neuropharmacology 1994, V33, P1471 CAPLUS
(23) Meller, S; Neuroscience 1992, V50, P7 CAPLUS
(24) Meller, S; Pain 1993, V52, P127 CAPLUS
(25) Meller, S; Pain 1993, V52, P127 CAPLUS
(26) Moncada, S; Ann N Y Acad Sci 1997, V15, P60
(27) Moncada, S; Pharmacol Rev 1991, V43, P109 CAPLUS
(28) Munger, B; Exp Neurol 1992, V118, P204 MEDLINE
(29) Przewlocki, R; Life Sci 1993, V53, PPL1 CAPLUS
(30) Randall, L; Arch Int Pharmacodyn 1957, V111, P409 CAPLUS

(31) Salvemini, D; Proc Natl Acad Sci USA 1993, V90, P7240 CAPLUS
(32) Sousa, A; Brain Res 2001, V897, P9 CAPLUS
(33) Tasker, R; Textbook of Pain 1989, P154
(34) Verge, V; Proc Natl Acad Sci USA 1992, V89, P11617 CAPLUS
(35) Woolf, C; Pain 1991, V44, P293 CAPLUS
(36) Yaksh, T; Physiol Behav 1976, V17, P1031 MEDLINE
(37) Zochodne, D; Am J Physiol 1995, V268, PH584 CAPLUS
(38) Zochodne, D; J Physiol 1991, V444, P615 CAPLUS

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L5 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:437475 CAPLUS
DOCUMENT NUMBER: 144:460856
ENTRY DATE: Entered STN: 11 May 2006
TITLE: Methods and compositions using a bile acid and a carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease
INVENTOR(S): Yoo, Seo Hong
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
CLASSIFICATION: 1-11 (Pharmacology)
Section cross-reference(s): 63
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006050165	A2	20060511	WO 2005-US39089	20051031
WO 2006050165	A3	20060706		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006142241	A1	20060629	US 2005-263087	20051031
PRIORITY APPLN. INFO.:			US 2004-624100P P	20041101
			US 2004-628421P P	20041116

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006050165	IPCI	A61K0031-575 [I,A]; A61K0047-36 [I,A]; A61K0009-00 [I,A]; A61P0025-16 [I,A]; A61P0025-28 [I,A]; A61K0009-00 [I,C]; A61K0031-575 [I,C]; A61K0047-36 [I,C]; A61P0025-00 [I,C]; A61K0031-575 [I,A]; A61K0009-00 [I,A]; A61K0047-36 [I,A]; A61P0025-16 [I,A]; A61P0025-28 [I,A]
	IPCR	A61K0031-575 [I,A]; A61K0009-00 [I,C]; A61K0009-00 [I,A]; A61K0031-575 [I,C]; A61K0047-36 [I,C]; A61K0047-36 [I,A]; A61P0025-00 [I,C]; A61P0025-16

		[I,A]; A61P0025-28 [I,A]
	ECLA	A61K031/575
US 2006142241	IPCI	A61K0031-718 [I,A]; A61K0031-716 [I,C*]; A61K0031-715 [I,A]; A61K0031-56 [I,A]
	IPCR	A61K0031-716 [I,C]; A61K0031-718 [I,A]; A61K0031-56 [I,C]; A61K0031-56 [I,A]; A61K0031-715 [I,C]; A61K0031-715 [I,A]
	NCL	514/059.000; 514/060.000; 514/171.000

ABSTRACT:
The invention discloses clear aqueous solns. of one or more bile acids and either an aqueous soluble starch conversion product or a non-starch polysaccharide. The solns. may be administered to a subject in conjunction with a pharmaceutical compound having a therapeutic effect in subjects with a neurodegenerative disease and/or a motor neuron disease. In some embodiments, the disease is amyotrophic lateral sclerosis.

SUPPL. TERM: neurodegenerative disease treatment bile acid carbohydrate; amyotrophic lateral sclerosis treatment bile acid carbohydrate; sol starch conversion product bile acid neurodegenerative disease treatment; polysaccharide bile acid neurodegenerative disease treatment

INDEX TERM: Nervous system, disease
(Huntington's chorea; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Nervous system, disease
(amyotrophic lateral sclerosis; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Adrenoceptor agonists
Albizia lebbek
Alzheimer's disease
Analgesics
Andrographis paniculata
Anesthetics
Anti-Alzheimer's agents
Anti-infective agents
Anti-inflammatory agents
Antibiotics
Antiparkinsonian agents
Antipyretics
Antitumor agents
Apoptosis
Azadirachta indica
Combination chemotherapy
Curcuma longa
Gymnema sylvestre
Hormone antagonists
Human
Immunomodulators
Infection
Inflammation
Justicia adhatoda
Momordica charantia
Moringa oleifera
Neoplasm
Nervous system agents
Pain
Panax
Paralysis
Parkinson's disease
Picrorhiza kurrooa
Spinal muscular atrophy

Terminalia arjuna
Tinospora cordifolia
(bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Amino acids, biological studies
Bile acids
Bile salts
Carbohydrates, biological studies
Hormones, animal, biological studies
Interferons
Interleukin 1
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Amines, biological studies
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bile acid conjugates; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Neurotrophic factors
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(brain-derived; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Bile acids
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with amines; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Nervous system, disease
(degeneration; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Natural products, pharmaceutical
(ginseng; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Mutation
(hSOD1; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Syrups (sweetening agents)
(hydrolyzed starch, solids; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Dietary fiber
(indigestible soluble fiber; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Spinal cord, disease
(injury; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Fever and Hyperthermia
(motor neuron; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Nerve, disease

(motor, progressive bulbar palsy; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Nerve, disease
(motor, pseudobulbar palsy; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Behavior
Nerve, disease
(motor; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Cell death
(neuron, motor neuron; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Cytoprotective agents
Nervous system agents
(neuroprotective agents; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Polysaccharides, biological studies
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(non-starch; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Poliomyelitis
(post-polio syndrome; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Injury
(spinal cord; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: Brain, disease
(stroke; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: 9054-89-1, Superoxide dismutase
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(1; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-60-2, Phentolamine 50-78-2, Acetylsalicylic acid 51-21-8, Fluorouracil 51-55-8, Atropine, biological studies 51-84-3, Acetylcholine, biological studies 52-21-1, Prednisoloneacetate 52-28-8, Codeinephosphate 52-53-9, Verapamil 52-67-5, D-Penicillamine 53-06-5, Cortisone 53-86-1, Indomethacin 54-05-7, Chloroquine 54-31-9, Furosemide 54-42-2, Idoxuridine 55-63-0, Nitroglycerin 56-75-7, Chloramphenicol 56-81-5, Glycerin, biological studies 57-00-1, Creatine 57-27-2, Morphine, biological studies 57-41-0, Phenytoin 57-66-9, Probenecid 57-96-5, Sulfinpyrazone 58-00-4, Apomorphine 58-15-1, Aminophenazone 58-32-2, Dipyridamole 58-55-9, Theophylline, biological studies 58-93-5, Hydrochlorothiazide 59-02-9 59-67-6, Niacin, biological studies 59-87-0, Nitrofurazone 61-68-7, Mefenamic acid

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Glycyrrhizin 1420-53-7, Codeine sulfate 1492-18-8, Leucovorin Calcium 1501-84-4, Rimantadine.hydrochloride 1744-22-5, Riluzole 1951-25-3, Amiodarone 2066-89-9, Pasiniazide 2295-58-1, Flopropione 2451-01-6, Terpin hydrate 2898-95-5, Sodium ursodeoxycholate 3056-17-5, Stavudine 3385-03-3, Flunisolide 3902-71-4, Trioxsalen 4205-91-8, Clonidine hydrochloride 4499-40-5, Oxtriphylline 4651-67-6, 7-Oxolithocholic acid 4651-67-6D, 7-Oxolithocholic acid, derivs., salts, and amine conjugates 4726-96-9, O-Benzyl-L-Serine 4884-68-8, Hydrastinine hydrochloride 5534-09-8, Beclomethasone-dipropionate 5845-67-0 6153-33-9 6384-92-5, NMDA 6535-15-5 6990-06-3, Fusidic acid 7232-21-5, Metoclopramide hydrochloride 7440-69-9D, Bismuth, compds. 7481-89-2, Zalcitabine 7683-59-2, Isoproterenol 9000-30-0, Guar gum 9000-69-5, Pectin 9004-10-8, Insulin, biological studies 9004-53-9, Dextrin 9004-54-0, Dextran, biological studies 9005-49-6, Heparin, biological studies 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9035-68-1, Proinsulin 9050-36-6, Maltodextrin 10118-90-8, Minocycline 10238-21-8, Glyburide 12125-02-9, Ammonium chloride, biological studies 12192-57-3, Aurothioglucose 12244-57-4, Goldsodium thiomalate 12794-10-4D, Benzodiazepine, derivs. 13392-18-2, Fenoterol 14605-22-2, Tauroursodeoxycholic acid 14605-22-2D, Tauroursodeoxycholic acid, derivs., salts, and amine conjugates 14663-23-1, Dantrolene sodium 14769-73-4, Levamisole 14923-17-2, Arcaine sulfate 15687-27-1, Ibuprofen 15826-37-6, Cromolynsodium 18559-94-9, Albuterol 19237-84-4, Prazosin hydrochloride 19771-63-2, Procysteine 19794-93-5, Trazodone 20559-55-1 21829-25-4, Nifedipine 22008-60-2, N-Formylmethionylphenylalanine 22204-53-1, Naproxen 22254-24-6, Ipratropium bromide 22494-42-4, Diflunisal 22916-47-8, Miconazole 23031-32-5, Terbutaline sulfate 23593-75-1, Clotrimazole 24169-02-6, Econazole nitrate 24279-91-2D, Carboquone, derivs. 25717-80-0, Molsidomine 29094-61-9, Glipizide 29883-15-6, Amygdalin 30034-03-8, Cefamandole sodium 30392-40-6, Bitolterol 30516-87-1, Zidovudine 32222-06-3, Calcitriol 34031-32-8, Auranofin 35711-34-3, Tolmetin sodium 36322-90-4, Piroxicam 36703-88-5, Isoprinosine 36791-04-5, Ribavirin 38304-91-5, Minoxidil 38579-27-0 38677-81-5, Pirbuterol 39809-25-1, Penciclovir 42399-41-7, Diltiazem 42924-53-8, Nabumetone 49562-28-9, Fenofibrate 51110-01-1, Somatostatin 51322-75-9, Tizanidine 51333-22-3, Budesonide
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: 51481-61-9, Cimetidine 53678-77-6, Muramyl dipeptide 54182-58-0, Sucralfate 54965-21-8, Albendazole 56180-94-0, Acarbose 56796-39-5, Cefmetazole sodium 59122-46-2, Misoprostol 59277-89-3, Acyclovir 60142-96-3, Gabapentin 61318-91-0, Sulconazole nitrate 63074-08-8, Terazosin hydrochloride 63585-09-1, Foscarnet sodium 63675-72-9, Nisoldipine 64211-46-7, Oxiconazole nitrate 64480-66-6, Glycoursodeoxycholic acid 64480-66-6D, Glycoursodeoxycholic acid, derivs., salts, and amine conjugates 64706-54-3, Bepridil 65277-42-1, Ketoconazole 66357-35-5, Ranitidine 67763-96-6,

Insulin-like growth factor-1 68547-97-7, Isoguvacine hydrochloride 69049-73-6, Nedocromil 69655-05-6, Didanosine 73590-58-6, Omeprazole 74872-77-8 75330-75-5, Lovastatin 75695-93-1, Isradipine 76824-35-6, Famotidine 76963-41-2, Nizatidine 77883-43-3 78628-80-5, Terbinafine hydrochloride 79902-63-9, Simvastatin 80474-14-2, Fluticasone-propionate 81131-70-6, Pravastatin sodium 83150-76-9, Octreotide 83881-52-1, Cetirizine dihydrochloride 84625-61-6, Itraconazole 86386-73-4, Fluconazole 89365-50-4, Salmeterol 93957-55-2, Fluvastatin sodium 103577-45-3, Lansoprazole 104227-87-4, Famciclovir 107753-78-6, Zafirlukast 107910-75-8, Ganciclovir sodium 111406-87-2, Zileuton 113852-37-2, Cidofovir 124832-27-5, Valacyclovir hydrochloride 129618-40-2, Nevirapine 133107-64-9, Insulin Lispro 134523-03-8, Atorvastatin-calcium 134678-17-4, Lamivudine 135062-02-1, Repaglinide 135354-02-8, Xaliproden 141673-59-8 143201-11-0, Cerivastatin sodium 147221-93-0, Delavirdine-mesylate 149845-06-7 151767-02-1, Montelukast sodium 155213-67-5, Ritonavir 157810-81-6, Indinavir sulfate 159989-65-8 161832-65-1, Talampanel 171599-83-0, Sildenafil citrate 403804-21-7 885947-44-4 886223-64-9, TR 500 886223-66-1, Mecamserin
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: 50-99-7, Glucose, biological studies
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liquid; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

INDEX TERM: 9005-25-8, Starch, biological studies
ROLE: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(soluble starch conversion product; bile acid and carbohydrate for reducing neurodegeneration in amyotrophic lateral sclerosis or other neurodegenerative disease)

L5 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1276834 CAPLUS
DOCUMENT NUMBER: 144:32135
ENTRY DATE: Entered STN: 06 Dec 2005
TITLE: Effect of diabetes on the mechanisms of intrathecal antinociception of sildenafil in rats
AUTHOR(S): Araiza-Saldana, Claudia Ivonne; Reyes-Garcia, Gerardo; Bermudez-Ocana, Deysi Yadira; Perez-Severiano, Francisca; Granados-Soto, Vinicio
CORPORATE SOURCE: Departamento de Farmacobiologia, Centro de Investigacion y de Estudios Avanzados-Coapa, 14330, Mex.
SOURCE: European Journal of Pharmacology (2005), 527(1-3), 60-70
CODEN: EJPHAZ; ISSN: 0014-2999
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 1-11 (Pharmacology)

ABSTRACT:
The mechanism of intrathecal antinociceptive action of the phosphodiesterase 5 inhibitor sildenafil was assessed in diabetic rats using the formalin test. Intrathecal administration of sildenafil (12.5-50 μg) produced a dose-related antinociception during both phases of the formalin test in non-diabetic and diabetic rats. Intrathecal pretreatment with N-L-nitro-arginine Me ester (L-NAME, nitric oxide (NO) synthase inhibitor, 1-50 μg), 1H-(1,2,4)-oxadiazolo(4,2-a)quinoxalin-1-one (ODQ, guanylyl cyclase inhibitor, 1-10 μg), KT5823 (protein kinase G (PKG) inhibitor, 5-500 ng), charybdotoxin (large-conductance Ca2+-activated K+ channel blocker, 0.01-1 ng), apamin (small-conductance Ca2+-activated K+ channel blocker, 0.1-3 ng) and glibenclamide (ATP-sensitive K+ channel blocker, 12.5-50 μg), but not N-L-nitro-arginine Me ester (L-NAME, 50 μg) or saline, significantly diminished sildenafil (50 μg)-induced antinociception in non-diabetic rats. Intrathecal administration of ODQ, KT5823, apamin and glibenclamide, but not L-NAME nor charybdotoxin, reversed intrathecal antinociception induced by sildenafil in diabetic rats. Results suggest that sildenafil produces its intrathecal antinociceptive effect via activation of NO-cyclic GMP-PKG-K+ channels pathway in non-diabetic rats. Data suggest that diabetes leads to a dysfunction in NO and large-conductance Ca2+-activated K+ channels. Sildenafil could have a role in the pharmacotherapy of diabetes-associated pain.

SUPPL. TERM: sildenafil mechanism intrathecal antinociception
diabetes mellitus

INDEX TERM: Potassium channel
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(ATP-sensitive; sildenafil mechanism of intrathecal antinociception in diabetes)

INDEX TERM: Potassium channel
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(calcium-activated large-conductance; sildenafil mechanism of intrathecal antinociception in diabetes)

INDEX TERM: Analgesics
Diabetes mellitus
Pain
Spinal cord
(sildenafil mechanism of intrathecal antinociception in diabetes)

INDEX TERM: 7665-99-8, Cyclic GMP 9054-75-5, Guanylyl cyclase 10102-43-9, Nitric oxide, biological studies 125978-95-2, Nitric oxide synthase 141588-27-4, Protein kinase G
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(sildenafil mechanism of intrathecal antinociception in diabetes)

INDEX TERM: 171599-83-0, Sildenafil citrate
ROLE: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sildenafil mechanism of intrathecal antinociception in diabetes)

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Ambriz-Tututi, M; Eur J Pharmacol 2005, V512, P121 CAPLUS
(2) Archer, S; Proc Natl Acad Sci U S A 1994, V91, P7583 CAPLUS
(3) Asomoza-Espinosa, R; Eur J Pharmacol 2001, V418, P195 CAPLUS
(4) Bjorkman, R; Acta Anaesthesiol Scand, Suppl 1995, V103, P1 MEDLINE

(5) Bolotina, V; Nature 1994, V368, P850 CAPLUS
(6) Calcutt, N; Eur J Pharmacol 1995, V285, P189 CAPLUS
(7) Calcutt, N; Pain 1996, V68, P293 CAPLUS
(8) Capone, F; Ann Ist Super Sanita 2004, V40, P223
(9) Carrier, G; Am J Physiol 1997, V273, PH76 CAPLUS
(10) Cesena, R; Neurosci Lett 1999, V262, P101 CAPLUS
(11) Chen, S; Anesthesiology 2001, V95, P525 CAPLUS
(12) Courteix, C; Pain 1993, V53, P81 MEDLINE
(13) Davies, N; J Bioenerg Biomembranes 1991, V23, P509 CAPLUS
(14) Dubuisson, D; Pain 1977, V4, P161 CAPLUS
(15) Edwards, G; Annu Rev Pharmacol Toxicol 1993, V33, P597 CAPLUS
(16) Fox, A; Pain 1999, V81, P307 CAPLUS
(17) Galer, B; Diabetes Res Clin Pract 2000, V47, P123 MEDLINE
(18) Gragasin, F; FASEB J 2004, V18, P1382 CAPLUS
(19) Granados-Soto, V; Curr Top Pharmacol 2003, V7, P209 CAPLUS
(20) Jain, N; Brain Res 2001, V909, P170 CAPLUS
(21) Jain, N; Pharmacology 2003, V67, P150 CAPLUS
(22) Kamei, J; Pain 2005, V117, P112 CAPLUS
(23) Kamei, J; Psychopharmacology 1994, V113, P318 CAPLUS
(24) Kina, V; Life Sci 2005, V76, P1939 CAPLUS
(25) Langtry, H; Drugs 1999, V57, P967 CAPLUS
(26) Lazaro-Ibanez, G; Eur J Pharmacol 2001, V426, P39 CAPLUS
(27) Levy, D; J Neurophysiol 2004, V92, P766 CAPLUS
(28) Liu, L; J Neurophysiol 2004, V92, P2323 CAPLUS
(29) Lozano-Cuenca, J; Eur J Pharmacol 2005, V513, P81 CAPLUS
(30) Lucas, K; Pharmacol Rev 2000, V52, P375 CAPLUS
(31) Malmberg, A; Pain 1993, V54, P291 CAPLUS
(32) Mayhan, W; Microcirculation 2004, V11, P605 CAPLUS
(33) Mixcotal-Zecuatl, T; Eur J Pharmacol 2000, V400, P81
(34) Mongan, L; Neuroscience 2005, V131, P161 CAPLUS
(35) Moreland, R; Trends Endocrinol Metab 1999, V10, P97 CAPLUS
(36) Nakamizo, T; J Neurosci Res 2003, V71, P485 CAPLUS
(37) Ortiz, M; Pharmacol Biochem Behav 2003, V76, P187 CAPLUS
(38) Patil, C; Pharmacology 2004, V72, P190 CAPLUS
(39) Rendell, M; JAMA 1999, V281, P421 CAPLUS
(40) Romey, G; J Physiol (Paris) 1984, V79, P259 CAPLUS
(41) Sachs, D; Proc Natl Acad Sci U S A 2004, V101, P3680 CAPLUS
(42) Safronov, B; Prog Neurobiol 1999, V59, P217 CAPLUS
(43) Sasaki, T; NeuroReport 1998, V9, P243 CAPLUS
(44) Sindrup, S; Pain 1999, V83, P389 CAPLUS
(45) Soares, A; Br J Pharmacol 2001, V134, P127 CAPLUS
(46) Soares, A; Eur J Pharmacol 2000, V400, P67 CAPLUS
(47) Sood, V; Indian J Exp Biol 2000, V38, P447 CAPLUS
(48) Sousa, A; Brain Res 2001, V897, P9 CAPLUS
(49) Stretton, D; Proc Natl Acad Sci U S A 1992, V9, P1325
(50) Tao, Y; Neuroscience 2002, V112, P439 CAPLUS
(51) Tegeder, I; Neurosci Lett 2002, V332, P146 CAPLUS
(52) Terrett, N; Bioorg Med Chem Lett 1996, V6, P1819
(53) Thebaud, B; Pediatr Res 2002, V52, P19 CAPLUS
(54) Torres-Lopez, J; Proc West Pharmacol Soc 2002, V45, P141 CAPLUS
(55) Wheeler-Aceto, H; Psychopharmacology 1991, V104, P35 CAPLUS
(56) Yaksh, T; Physiol Behav 1976, V17, P1031 MEDLINE
(57) Yamashita, S; Neurosci Lett 1994, V170, P208 CAPLUS

(58) Yamazumi, I; Jpn J Pharmacol 2001, V87, P268 CAPLUS
(59) Yasuda, H; Rinsho Shinkeigaku 1999, V39, P87 MEDLINE
(60) Zimmermann, M; Pain 1983, V16, P109 MEDLINE
(61) Zushida, K; Eur J Pharmacol 2002, V453, P209 CAPLUS

L5 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1058400 CAPLUS
DOCUMENT NUMBER: 144:185037
ENTRY DATE: Entered STN: 03 Oct 2005
TITLE: The possible role of the NO-cGMP pathway in nociception: Different spinal and supraspinal action of enzyme blockers on rat dorsal horn neurones
AUTHOR(S): Hoheisel, Ulrich; Unger, Thomas; Mense, Siegfried
CORPORATE SOURCE: Institut fuer Anatomie und Zellbiologie, Universitaet Heidelberg, Heidelberg, D-69120, Germany
SOURCE: Pain (2005), 117(3), 358-367
CODEN: PAINDB; ISSN: 0304-3959
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 2-8 (Mammalian Hormones)
ABSTRACT:
In the literature, the pro- or antinociceptive effects of nitric oxide (NO) and cyclic guanosine monophosphate (cGMP) are discussed controversially. Our laboratory and others have reported that in the spinal cord a local lack of NO has an excitatory action on the ongoing (background) activity of dorsal horn neurons. Here, we tested the hypothesis that this effect of NO is mediated by cGMP and that part of the controversy is due to differences in the spinal and supraspinal actions of both compds. In anesthetized rats, impulse activity of lumbar dorsal horn neurons was recorded, and blockers of NO- and cGMP-synthesis, as well as the phosphodiesterase 5 (PDE5) inhibitor ***sildenafil*** (which increases the cGMP level), or 8-Bromo-cGMP (a membrane permeable cGMP analog) were administered spinally or supraspinally. Topical superfusion of the spinal cord with a blocker of the guanylyl cyclase (ODQ) to reduce the cGMP level led to an increase in background activity of nociceptive lumbar dorsal horn neurons similar to that caused by L-NAME, a blocker of the NO synthase. Spinal superfusion with ***sildenafil*** or 8-Bromo-cGMP had no excitatory effect. In contrast, injections of sildenafil or 8-Bromo-cGMP into the third cerebral ventricle caused an increased background activity in lumbar dorsal horn neurons, while L-NAME and ODQ were ineffective. The results show that at the spinal level, a lack of cGMP and NO has an excitatory action on dorsal horn neurons, whereas supraspinally an elevated level of cGMP is excitatory.

SUPPL. TERM: nitric oxide cGMP dorsal horn neuron; nociception spinal cord LNAME ODQ sildenafil
INDEX TERM: Neurotransmission
(administration of nitric oxide synthase blocker, L-NAME or guanylyl cyclase blocker, ODQ led to increase in impulse activity of rat dorsal horn neurons)
INDEX TERM: Spinal cord
(dorsal horn; administration of nitric oxide synthase blocker, L-NAME or guanylyl cyclase blocker, ODQ to reduce spinal NO or cGMP level led to increase in impulse activity of rat dorsal horn neurons)
INDEX TERM: Behavior
(exploratory; possible role of the NO-cGMP pathway in nociception in relation to different spinal and supraspinal actions of enzyme blockers on rat dorsal horn neurons)
INDEX TERM: Myositis
(possible role of the NO-cGMP pathway in nociception in relation to different spinal and supraspinal actions of enzyme blockers on rat dorsal horn neurons)

INDEX TERM: Brain
(third ventricle; administration of phosphodiesterase 5 inhibitor, sildenafil or cGMP analog, 8-bromo-cGMP into third cerebral ventricle increased background activity while L-NAME and ODQ were ineffective in lumbar dorsal horn neurons of rat)

INDEX TERM: Pain
Spinal cord
(topical superfusion of spinal cord with guanylyl cyclase blocker, ODQ to reduce cGMP level led to increase in background activity of nociceptive lumbar dorsal horn neurons of rat)

INDEX TERM: 9054-75-5, Guanylyl cyclase 41443-28-1, ODQ
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of guanylyl cyclase blocker, ODQ led to increase in impulse activity of rat dorsal horn neurons)

INDEX TERM: 31356-94-2, 8-Bromo-cGMP
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of membrane permeable cGMP analog, 8-bromo-cyclic guanosine monophosphate into third cerebral ventricle increased background activity in lumbar dorsal horn neurons of rat)

INDEX TERM: 50903-99-6, L-NAME
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of nitric oxide synthase blocker, L-NAME led to increase in impulse activity of rat dorsal horn neurons)

INDEX TERM: 10102-43-9, Nitric oxide, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of nitric oxide synthase blocker, L-NAME or guanylyl cyclase blocker, ODQ to reduce spinal NO level led to increase in impulse activity of rat dorsal horn neurons)

INDEX TERM: 7665-99-8, Cyclic guanosine monophosphate
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of nitric oxide synthase blocker, L-NAME or guanylyl cyclase blocker, ODQ to reduce spinal cGMP level led to increase in impulse activity of rat dorsal horn neurons)

INDEX TERM: 9068-52-4, Phosphodiesterase 5 139755-83-2, Sildenafil
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(administration of phosphodiesterase 5 inhibitor, sildenafil into third cerebral ventricle increased background activity in lumbar dorsal horn neurons of rat)

INDEX TERM: 125978-95-2, Nitric oxide synthase
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; administration of nitric oxide synthase blocker, L-NAME led to increase in impulse activity of rat dorsal horn neurons)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Budzinsk, M; Life Sci 2000, V66, P301
(2) Duarte, I; Mediators Inflamm 2000, V9, P25 CAPLUS
(3) Duggan, A; Prog Brain Res 1989, V77, P193
(4) Fields, H; Textbook of pain 1999, P309

(5) Garthwaite, J; Mol Pharmacol 1995, V48, P184 CAPLUS
(6) Goldstein, I; N Engl J Med 1998, V338, P1397 CAPLUS
(7) Haley, J; Neuropharmacology 1992, V31, P251 CAPLUS
(8) Hoheisel, U; Neurosci Lett 1998, V257, P21 CAPLUS
(9) Hoheisel, U; Pain 2000, V88, P249 CAPLUS
(10) Jain, N; Brain Res 2001, V909, P170 CAPLUS
(11) Kruuse, C; J Cereb Blood Flow Metab 2002, V22, P1124 CAPLUS
(12) Lim, P; J Int Med Res 2002, V30, P137 CAPLUS
(13) Lin, Q; J Neurosci 1997, V17, P3293 CAPLUS
(14) Luo, Z; Curr Rev Pain 2000, V4, P459 MEDLINE
(15) Machelska, H; Pol J Pharmacol 1998, V50, P407 CAPLUS
(16) Manjarrez, E; Neurosci Lett 2001, V309, P5 CAPLUS
(17) Meller, S; Neuroscience 1994, V60, P347
(18) Meller, S; Pain 1993, V52, P127 CAPLUS
(19) Millan, M; Prog Neurobiol 2002, V66, P355 CAPLUS
(20) Milman, H; Ann Pharmacother 2002, V36, P1129 CAPLUS
(21) Moreland, R; Trends Endocrinol Metab 1999, V10, P97 CAPLUS
(22) Olsson, A; Int J Clin Pract 2000, V54, P561 CAPLUS
(23) Paxinos, G; The rat brain in stereotaxic coordinates 1986
(24) Pehl, U; Neuroscience 1997, V77, P563 CAPLUS
(25) Philippu, A; IBRO handbook series:methods in the neuroscience 1984, V6, P3 CAPLUS
(26) Sakurada, C; Neurochem Int 2001, V38, P417 CAPLUS
(27) Sandkuhler, J; Prog Neurobiol 1996, V50, P49 MEDLINE
(28) Semos, M; Neuropharmacology 1994, V33, P1487 CAPLUS
(29) Sousa, A; Brain Res 2001, V897, P9 CAPLUS
(30) Tegeder, I; Neurosci Lett 2002, V332, P146 CAPLUS
(31) Yu, X; Neuroscience 1991, V44, P715 CAPLUS
(32) Zimmermann, M; Pain 1983, V16, P109 MEDLINE

L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:136521 CAPLUS
DOCUMENT NUMBER: 142:225784
ENTRY DATE: Entered STN: 17 Feb 2005
TITLE: Nanoparticulate sildenafil free base compositions
INVENTOR(S): Ryde, Tuula A.; Hovey, Douglas C.; Bosch, H. William
PATENT ASSIGNEE(S): Elan Pharma International Ltd., Ire.
SOURCE: PCT Int. Appl., 76 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: A61K009-00
CLASSIFICATION: 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005013937	A2	20050217	WO 2004-US19106	20040723
WO 2005013937	A3	20050616		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005042177	A1	20050224	US 2004-895405		20040721
CA 2533163	A1	20050217	CA 2004-2533163		20040723
EP 1658053	A2	20060524	EP 2004-786037		20040723
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK					
JP 2006528176	T	20061214	JP 2006-521069		20040723
PRIORITY APPLN. INFO.:			US 2003-489101P	P	20030723
			WO 2004-US19106	W	20040723

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005013937	ICM	A61K009-00
	IPCI	A61K0009-00 [ICM,7]
	IPCR	A61K0009-00 [I,C*]; A61K0009-00 [I,A]; A61K0009-14 [I,C*]; A61K0009-14 [I,A]; A61K0009-19 [N,C*]; A61K0009-19 [N,A]; A61K0009-20 [N,C*]; A61K0009-20 [N,A]
	ECLA	A61K009/00M18B; A61K009/14H6
US 2005042177	IPCI	A61L0009-04 [ICM,7]; A61K0009-14 [ICS,7]; A61K0031-496 [ICS,7]
	IPCR	A61K0009-14 [I,C*]; A61K0009-14 [I,A]; A61K0031-496 [I,C*]; A61K0031-496 [I,A]; A61L0009-04 [I,C*]; A61L0009-04 [I,A]
	NCL	424/046.000; 514/252.160
CA 2533163	IPCI	A61K0009-10 [I,A]; A61K0009-14 [I,A]; A61K0009-19 [I,A]
	IPCR	A61K0009-14 [I,A]; A61K0009-00 [I,C*]; A61K0009-00 [I,A]; A61K0009-10 [I,C]; A61K0009-10 [I,A]; A61K0009-14 [I,C]; A61K0009-19 [I,C]; A61K0009-19 [I,A]; A61K0009-20 [N,C*]; A61K0009-20 [N,A]
	ECLA	A61K009/00M18B; A61K009/14H6
EP 1658053	IPCI	A61K0009-14 [ICM,7]; A61K0009-19 [ICS,7]; A61K0009-10 [ICS,7]
	IPCR	A61K0009-00 [I,C*]; A61K0009-00 [I,A]; A61K0009-14 [I,C*]; A61K0009-14 [I,A]; A61K0009-19 [N,C*]; A61K0009-19 [N,A]; A61K0009-20 [N,C*]; A61K0009-20 [N,A]
	ECLA	A61K009/00M18B; A61K009/14H6
JP 2006528176	IPCI	A61K0009-14 [I,A]; A61K0009-12 [I,A]; A61K0047-38 [I,A]; A61K0009-20 [I,A]; A61K0047-10 [I,A]; A61K0047-36 [I,A]; A61K0047-20 [I,A]; A61K0031-496 [I,A]; A61P0015-10 [I,A]; A61P0015-00 [I,C*]; A61K0009-70 [I,A]
	FTERM	4C076/AA24; 4C076/AA26; 4C076/AA32; 4C076/AA71; 4C076/BB01; 4C076/BB25; 4C076/CC01; 4C076/CC03; 4C076/CC11; 4C076/CC15; 4C076/CC17; 4C076/CC18; 4C076/CC27; 4C076/DD01Y; 4C076/DD02Y; 4C076/DD04Y; 4C076/DD07Y; 4C076/DD12Y; 4C076/DD16Y; 4C076/DD38Y; 4C076/EE32Y; 4C076/EE38; 4C076/FF04; 4C076/FF07; 4C076/GG02; 4C076/GG03; 4C076/GG06; 4C086/AA01; 4C086/AA02; 4C086/CB06; 4C086/GA20; 4C086/MA02; 4C086/MA03; 4C086/MA05; 4C086/MA13; 4C086/MA34; 4C086/MA43; 4C086/MA59; 4C086/NA11; 4C086/ZA81

ABSTRACT:
The present invention is directed to nanoparticulate compns. comprising ***sildenafil*** free base. The sildenafil free base particles have an effective average particle size of <2000 nm. Thus, 30 g the nanoparticulate sildenafil free base dispersion was added to 3.0 g mannitol and 1.5 g pullulan. A wafer tray was then filled by adding 0.5 g the diluted sildenafil free base dispersion to each 0.5-mL well and the wafer tray was then placed in a lyophilizer for 48 h to produce the final lyophilized wafer dosage form.

SUPPL. TERM: sildenafil nanoparticulate

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C12-18-alkyl[(ethylphenyl)methyl]dimethyl, chlorides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Alcohols, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C16-18, ethoxylated, emulsifying wax; nanoparticulate sildenafil free base compns.)

INDEX TERM: Alcohols, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(C16-18; nanoparticulate sildenafil free base compns.)

INDEX TERM: Blood vessel, disease
(Kawasaki; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Mirapol; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(aerosols; nanoparticulate sildenafil free base compns.)

INDEX TERM: Thyroid gland
(agents for; nanoparticulate sildenafil free base compns.)

INDEX TERM: Polyethers, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkyl aryl, sulfonates; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, bromides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides, Alkaquat; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Allergy
(allergic asthma; nanoparticulate sildenafil free base compns.)

INDEX TERM: Allergy
Inflammation
Nose, disease
(allergic rhinitis; nanoparticulate sildenafil free base compns.)

INDEX TERM: Asthma
(allergic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Prostaglandins
ROLE: THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
(analogs; nanoparticulate sildenafil free base compns.)

INDEX TERM: Heart, disease
(angina pectoris; nanoparticulate sildenafil free base compns.)

INDEX TERM: Heart, disease
(arrhythmia; nanoparticulate sildenafil free base compns.)

INDEX TERM: Skin preparations (pharmaceutical)
(astringents; nanoparticulate sildenafil free base compns.)

INDEX TERM: Prostate gland, disease
(benign hyperplasia; nanoparticulate sildenafil free base compns.)

INDEX TERM: Hyperplasia
(benign prostatic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(benzyl-C12-18-alkyldimethyl, chlorides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(benzyl-C14-18-alkyldimethyl, chlorides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Adhesives
(biol.; nanoparticulate sildenafil free base compns.)

INDEX TERM: Bronchi, disease
Inflammation
(bronchitis; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(buccal; nanoparticulate sildenafil free base compns.)

INDEX TERM: Lipids, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Lung, disease
(chronic obstructive pulmonary disease; nanoparticulate sildenafil free base compns.)

INDEX TERM: Asthma
(chronic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Reproductive system
(clitoris, disease; nanoparticulate sildenafil free base compns.)

INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(coco alkylbis(hydroxyethyl)methyl, chlorides; nanoparticulate sildenafil free base compns.)

INDEX TERM: Imaging agents
(contrast; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(controlled-release; nanoparticulate sildenafil free base compns.)

INDEX TERM: Artery, disease

(coronary; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(delayed release; nanoparticulate sildenafil free base compns.)

INDEX TERM: Mental and behavioral disorders
(depression; nanoparticulate sildenafil free base compns.)

INDEX TERM: Kidney, disease
(diabetic nephropathy; nanoparticulate sildenafil free base compns.)

INDEX TERM: Nerve, disease
(diabetic neuropathy; nanoparticulate sildenafil free base compns.)

INDEX TERM: Fatty acids, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters; nanoparticulate sildenafil free base compns.)

INDEX TERM: Castor oil
Phospholipids, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ethoxylated; nanoparticulate sildenafil free base compns.)

INDEX TERM: Heart, disease
(failure; nanoparticulate sildenafil free base compns.)

INDEX TERM: Sexual behavior
(female; nanoparticulate sildenafil free base compns.)

INDEX TERM: Stomach, disease
(gastroparesis, diabetic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(gels; nanoparticulate sildenafil free base compns.)

INDEX TERM: Vein, disease
(hemorrhoid; nanoparticulate sildenafil free base compns.)

INDEX TERM: Vasoconstriction
(hypoxic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Sexual disorders
(impotence; nanoparticulate sildenafil free base compns.)

INDEX TERM: Bladder, disease
(incontinence; nanoparticulate sildenafil free base compns.)

INDEX TERM: Mycobacterium
(infection; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(injections, i.p.; nanoparticulate sildenafil free base compns.)

INDEX TERM: Spinal cord, disease
(injury, sexual dysfunction due to; nanoparticulate sildenafil free base compns.)

INDEX TERM: Intestine, disease
(irritable bowel syndrome; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(nanoparticles; nanoparticulate sildenafil free base compns.)

INDEX TERM:

Adrenoceptor agonists
Allergy
Allergy inhibitors
Alopecia
Alzheimer's disease
Analgesics
Anthelmintics
Anti-inflammatory agents
Antiarrhythmics
Antibacterial agents
Antibiotics
Anticoagulants
Anticonvulsants
Antidepressants
Antidiabetic agents
Antiemetics
Antihistamines
Antihypertensives
Antiobesity agents
Antipyretics
Antithyroid agents
Antitumor agents
Antitussives
Antiviral agents
Anxiety
Anxiolytics
Appetite depressants
Atherosclerosis
Blood products
Blood substitutes
Cardiovascular agents
Cardiovascular system, disease
Cholinergic agonists
Cinnamomum aromaticum
Cornus officinalis
Cough
Diabetes mellitus
Diagnostic agents
Dietary supplements
Diuresis
Diuretics
Dopamine agonists
Drug bioavailability
Dysmenorrhea
Epilepsy
Fever and Hyperthermia
Fungicides
Glaucoma (disease)
Hemorrhage
Hemostatics
Hypertension
Hypnotics and Sedatives
Imaging agents
Immunosuppressants
Immunosuppression
Inflammation
Inotropics
Multiple sclerosis
Muscarinic antagonists
Muscle relaxants
Mycosis
Neoplasm
Nervous system, disease
Nervous system stimulants

Obesity
Pain
Panax ginseng
Particle size distribution
Preeclampsia
Psoriasis
Pulsatilla pratensis
Radiopharmaceuticals
Respiratory failure
Sexual disorders
Sleep
Sodium channel blockers
Stabilizing agents
Thrombosis
Vasodilators
Vomiting
α-Adrenoceptor antagonists
β-Adrenoceptor antagonists
(nanoparticulate sildenafil free base compns.)

INDEX TERM: Amine oxides
Amines, biological studies
Amino acids, biological studies
Cannabinoids
Carotenes, biological studies
Caseins, biological studies
Corticosteroids, biological studies
Gelatins, biological studies
Glycerophospholipids
Nucleotides, biological studies
Opioids
Peptides, biological studies
Phosphates, biological studies
Phospholipids, biological studies
Phosphonium compounds
Polyoxyalkylenes, biological studies
Prostaglandins
Proteins
Quaternary ammonium compounds, biological studies
Sex hormones
Sulfonium compounds
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(nasal; nanoparticulate sildenafil free base compns.)

INDEX TERM: Skin, disease
(necrosis; nanoparticulate sildenafil free base compns.)

INDEX TERM: Esophagus
(nutcracker; nanoparticulate sildenafil free base compns.)

INDEX TERM: Bladder, disease
(obstruction; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(ointments, creams; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(ointments; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(ophthalmic; nanoparticulate sildenafil free base compns.)

INDEX TERM: Drug delivery systems
(oral; nanoparticulate sildenafil free base compns.)
INDEX TERM: Drug delivery systems
(parenterals; nanoparticulate sildenafil free base compns.)
INDEX TERM: Blood vessel, disease
(peripheral; nanoparticulate sildenafil free base compns.)
INDEX TERM: Polyoxyalkylenes, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phenolic; nanoparticulate sildenafil free base compns.)
INDEX TERM: Quaternary ammonium compounds, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymers; nanoparticulate sildenafil free base compns.)
INDEX TERM: Phenolic resins, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyoxyalkylene-; nanoparticulate sildenafil free base compns.)
INDEX TERM: Coronary angioplasty
(post-percutaneous transluminal; nanoparticulate sildenafil free base compns.)
INDEX TERM: Parturition disorders
(premature parturition; nanoparticulate sildenafil free base compns.)
INDEX TERM: Hypertension
(pulmonary; nanoparticulate sildenafil free base compns.)
INDEX TERM: Drug delivery systems
(rectal; nanoparticulate sildenafil free base compns.)
INDEX TERM: Amines, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(salts; nanoparticulate sildenafil free base compns.)
INDEX TERM: Necrosis
(skin; nanoparticulate sildenafil free base compns.)
INDEX TERM: Muscle, disease
(spasm; nanoparticulate sildenafil free base compns.)
INDEX TERM: Injury
(spinal cord, sexual dysfunction due to; nanoparticulate sildenafil free base compns.)
INDEX TERM: Brain, disease
(stroke; nanoparticulate sildenafil free base compns.)
INDEX TERM: Drug delivery systems
(sustained-release; nanoparticulate sildenafil free base compns.)
INDEX TERM: Drug delivery systems
(topical; nanoparticulate sildenafil free base compns.)
INDEX TERM: Tachykinin receptors
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(type NK1, antagonists; nanoparticulate

sildenafil free base compns.)

INDEX TERM: Monoamines
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(uptake inhibitors; nanoparticulate sildenafil free base compns.)

INDEX TERM: Infection
(viral; nanoparticulate sildenafil free base compns.)

INDEX TERM: Opioid antagonists
(κ-opioid; nanoparticulate sildenafil free base compns.)

INDEX TERM: Opioid antagonists
(μ-opioid; nanoparticulate sildenafil free base compns.)

INDEX TERM: 13598-36-2D, Phosphonic acid, alkylidenebis- derivs.
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Bisphosphonate; nanoparticulate sildenafil free base compns.)

INDEX TERM: 146702-39-8, PEG vitamin E
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PEG vitamin E; nanoparticulate sildenafil free base compns.)

INDEX TERM: 608094-65-1, PEG-vitamin A
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PEG-vitamin A; nanoparticulate sildenafil free base compns.)

INDEX TERM: 330784-47-9, TA 1790
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TA 1790; nanoparticulate sildenafil free base compns.)

INDEX TERM: 33507-63-0, Substance P
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; nanoparticulate sildenafil free base compns.)

INDEX TERM: 10102-43-9, NO, biological studies
ROLE: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(donors; nanoparticulate sildenafil free base compns.)

INDEX TERM: 9004-06-2, Elastase 9068-52-4, PDE 5
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; nanoparticulate sildenafil free base compns.)

INDEX TERM: 139755-83-2, Sildenafil 171599-83-0, Sildenafil citrate
ROLE: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nanoparticulate sildenafil free base compns.)

INDEX TERM: 50-60-2, Phentolamine 56-81-5, Glycerol, biological studies 57-09-0, Hexadecyltrimethylammonium bromide 57-11-4, Stearic acid, biological studies 57-88-5, Cholesterol, biological studies 58-00-4, Apomorphine 58-22-0, Testosterone 62-49-7D, Choline, esters 69-89-6D, Xanthine, alkyl derivs. 69-89-6D, Xanthine, derivs. 74-79-3, L-Arginine, biological studies 79-06-1D, Acrylamide, quaternized derivs. 102-71-6, Triethanolamine, biological studies 112-00-5,

Lauryltrimethylammonium chloride 122-19-0, Stearalkonium chloride 123-03-5, CPC 139-07-1, Lauryldimethylbenzylammonium chloride 140-72-7, Cetylpyridinium bromide 146-48-5, Yohimbine 151-21-3, Sodium lauryl sulfate, biological studies 288-32-4D, Imidazole, quaternized salts 506-59-2, Dimethylammonium chloride 577-11-7, Docusate sodium 593-81-7D, Trimethylammonium chloride, coco acyl derivs. 745-65-3, Alprostadil 1119-94-4, Dodecyltrimethylammonium bromide 1119-97-7, Tetradecyltrimethylammonium bromide 1327-43-1, Magnesium aluminum silicate 1592-23-0, Calcium Stearate 1643-19-2, Tetrabutylammonium bromide 2082-84-0, Decyltrimethylammonium bromide 2373-23-1, Dioctyl sulfosuccinate 2840-24-6D, Trimethylammonium bromide, coco acyl derivs. 5137-55-3, Methyltrioctylammonium chloride 5350-41-4, Benzyltrimethylammonium bromide 7173-51-5, Dimethyldidecylammonium chloride 7281-04-1, Lauryldimethylbenzylammonium bromide 7631-86-9, Silica, biological studies 9000-01-5, Gum acacia 9000-30-0D, Guar, cationic derivs. 9000-65-1, Tragacanth gum 9001-63-2, Lysozyme 9002-89-5, Poly(vinyl alcohol) 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose sodium 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose 9004-99-3, Polyoxyethylene stearate 9005-63-4D, Polyethylene glycol sorbitan, esters with fatty acids 9050-04-8, CM cellulose calcium 9050-31-1, Hydroxypropyl methyl cellulose phthalate 12441-09-7D, Sorbitan, esters 16962-53-1D, Trimethylammonium, halides 16969-45-2D, Pyridinium, alkyl salts 17000-01-0D, Dimethylammonium, dialkyl derivs. 18186-71-5, Dodecyltriethylammonium bromide 19794-93-5, Trazodone 25086-89-9, Vinyl acetate-vinyl pyrrolidone copolymer 25301-02-4, Ethylene oxide-formaldehyde-4-(1,1,3,3-tetramethylbutyl)phenol copolymer 25322-68-3, Polyethylene glycol 25322-68-3D, Polyethylene glycol, alkyl ethers 26062-79-3, Polydiallyldimethylammonium chloride 27195-16-0, Sucrose distearate 27321-96-6, Polyethylene glycol cholesteryl ether 28228-56-0, Decyldimethylhydroxyethylammonium chloride 28679-24-5, Dodecylbenzyltriethylammonium chloride 29454-16-8D, Sodium sulfosuccinate, dialkyl esters 29836-26-8, n-Octyl-β-D-glucopyranoside 31566-31-1, Glyceryl monoStearate 37318-31-3, Sucrose stearate 38443-60-6, Decyltriethylammonium chloride 52467-63-7, Tricetylmethylammonium chloride 55008-57-6, 2-N,N-Dimethylaminoethyl methacrylate-vinylpyrrolidone copolymer dimethyl sulfate 58846-77-8, n-Decyl β-D-glucopyranoside 59080-45-4, n-Hexyl-β-D-glucopyranoside 59122-46-2, Misoprostol 59122-55-3, n-Dodecyl β-D-glucopyranoside 63722-04-3D, alkyl derivs. 65059-43-0, Myristyltrimethylammonium methyl sulfate 69227-93-6, n-Dodecyl β-D-maltoside 69984-73-2, Nonoyl β-D-glucopyranoside 74191-85-8, Doxazosine 78617-12-6, n-Heptyl-β-D-glucopyranoside 81859-24-7, POLYQUAT 10 82494-09-5, n-Decyl β-D-maltopyranoside 85261-19-4, Nonanoyl-N-methylglucamide 85261-20-7, Decanoyl-N-methylglucamide 85316-98-9, Octanoyl-N-methylglucamide 85618-20-8, n-Heptyl-β-D-thioglucopyranoside 85618-21-9, Octyl-β-D-thioglucopyranoside 101397-87-9, Heptanoyl-N-methylglucamide 106392-12-5, Poloxamer

110617-70-4, Poloxamine 119905-05-4, Delequamine
171596-29-5, Tadalafil 178308-66-2, E-4010 212500-03-3,
T-1032 224785-90-4, Vardenafil 283158-20-3,
N-Tetradecyldimethylbenzylammonium chloride monohydrate
292179-05-6, M-54033 292179-06-7, M-54018 329326-68-3,
p-Isononylphenoxypoly(glycidol) 503178-50-5, Benzyl
di(2-chloroethyl)ethylammonium bromide 630400-66-7,
Lauryldimethyl(ethenoxy)4ammonium chloride 630400-67-8,
Lauryldimethyl(ethenoxy)4ammonium bromide 634601-99-3,
Decyldimethylhydroxyethyl ammonium chloride bromide
844493-11-4 844493-14-7, EMD 221829 844493-16-9, EMR
62-203
ROLE: THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(nanoparticulate sildenafil free base compns.)

INDEX TERM: 9007-12-9, Calcitonin
ROLE: THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(parathyroid; nanoparticulate sildenafil free
base compns.)

INDEX TERM: 58-61-7, Adenosine, biological studies
ROLE: BSU (Biological study, unclassified); BIOL (Biological
study)
(regulating agents; nanoparticulate sildenafil
free base compns.)

L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:778872 CAPLUS
DOCUMENT NUMBER: 141:282796
ENTRY DATE: Entered STN: 24 Sep 2004
TITLE: Pharmaceutical compositions containing cGMP PDE5
inhibitors for alleviating pain or spasm in
patients with spinal cord injury,
and their use for the therapy
INVENTOR(S): Kosaka, Akira
PATENT ASSIGNEE(S): Pfizer Pharmaceutical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: A61K045-00
SECONDARY: A61K031-519; A61P025-04; A61P025-08
CLASSIFICATION: 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2004262814	A	20040924	JP 2003-53884		20030228
US 2005107405	A1	20050519	US 2004-787470		20040226
PRIORITY APPLN. INFO.:			JP 2003-53884	A	20030228

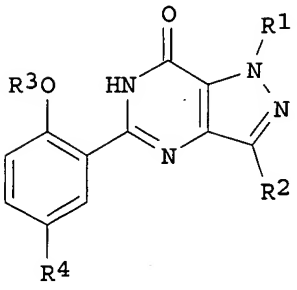
PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004262814	ICM	A61K045-00
	ICS	A61K031-519; A61P025-04; A61P025-08
	IPCI	A61K0045-00 [ICM,7]; A61K0031-519 [ICS,7]; A61P0025-04 [ICS,7]; A61P0025-08 [ICS,7]; A61P0025-00 [ICS,7,C*]
	IPCR	A61K0031-00 [I,A]; A61K0031-00 [I,C*]; A61K0031-519 [I,A]; A61K0031-519 [I,C*]
	FTERM	4C084/AA16; 4C084/ZA08; 4C084/ZA29; 4C086/AA01; 4C086/AA02; 4C086/CB06; 4C086/MA01; 4C086/MA52;

		4C086/ZA08; 4C086/ZA29
US 2005107405	IPCI	A61K0031-519 [ICM,7]
	IPCR	A61K0031-00 [I,A]; A61K0031-00 [I,C*]; A61K0031-519 [I,A]; A61K0031-519 [I,C*]
	NCL	514/262.100
	ECLA	A61K031/00; A61K031/519

OTHER SOURCE(S): MARPAT 141:282796

GRAPHIC IMAGE:



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ABSTRACT:
Title compns. contain ED of cGMP PDE5 inhibitors, e.g. pyrimidines I [R1 = H, C1-3 (perfluoro)alkyl, C3-5 cycloalkyl; R2 = H, (un)substituted C1-6 alkyl, C1-3 perfluoroalkyl, C3-6 cycloalkyl; R3 = (un)substituted C1-6 alkyl, C1-6 perfluoroalkyl, C3-6 alkenyl, etc.; R4 = (un)substituted C1-4 alkyl, (un)substituted C2-4 alkenyl, (un)substituted C2-4 alkanoyl, (methyl)phenyl, (methyl)pyridyl, etc.]. Thus, Viagra tablets (containing 50 mg sildenafil citrate) alleviated pain and spasm in male patients with ***spinal*** cord injury.

SUPPL. TERM: cGMP phosphodiesterase 5 inhibitor pyrimidine treatment
pain spasm; spinal cord injury
treatment sildenafil

INDEX TERM: Analgesics
Anticonvulsants
Human
Pain
(cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

INDEX TERM: Spinal cord, disease
(injury; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

INDEX TERM: Drug delivery systems
(oral; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

INDEX TERM: Muscle, disease
(spasm; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

INDEX TERM: Injury
(spinal cord; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

INDEX TERM: Drug delivery systems
(tablets; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal

cord injury)
INDEX TERM: 9068-52-4, CGMP phosphodiesterase
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(5; cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)
INDEX TERM: 139755-83-2, Sildenafil 171599-83-0, Viagra
ROLE: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cGMP PDE5 inhibitors for alleviating pain or spasm in patients with spinal cord injury)

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:905580 CAPLUS
DOCUMENT NUMBER: 138:219682
ENTRY DATE: Entered STN: 29 Nov 2002
TITLE: Participation of peripheral and spinal phosphodiesterases 4 and 5 in inflammatory pain
AUTHOR(S): Torres-Lopez, Jorge E.; Arguelles, Carlos F.; Granados-Soto, Vinicio
CORPORATE SOURCE: Departamento de Farmacobiologia, Centro de Investigacion y de Estudios Avanzados del Instituto Politecnico Nacional, Mexico, D.F., 14330, Mex.
SOURCE: Proceedings of the Western Pharmacology Society (2002), 45, 141-143
CODEN: PWPSA8; ISSN: 0083-8969
PUBLISHER: Western Pharmacology Society
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 14-15 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 1

ABSTRACT:
The effect of phosphodiesterase (PDEs) 4 and 5 inhibitors after peripheral and spinal administration in the formalin test was evaluated using female Wistar rats of 7-8 wk. Antinociception was assessed by the formalin test. The local peripheral administration of the PDE4 inhibitor rolipram increased formalin-induced nociception during phase 2 whereas that spinal administration induced antinociception during phase 1. Sildenafil (a PDE5 inhibitor) produced antinociception after peripheral and spinal administration. Data suggest that PDE5 could be a target for development of antinociceptive drugs in the future.

SUPPL. TERM: PDE4 PDE5 spinal peripheral phosphodiesterase analgesia inflammatory pain
INDEX TERM: Analgesia
Pain
Spinal cord
(peripheral and spinal phosphodiesterases 4 and 5 in inflammatory pain)
INDEX TERM: Analgesics
(peripheral and spinal phosphodiesterases 4 and 5 in inflammatory pain in relation to)
INDEX TERM: 9036-21-9, Phosphodiesterase 4 9068-52-4, Phosphodiesterase 5
ROLE: BSU (Biological study, unclassified); BIOL (Biological study)
(peripheral and spinal phosphodiesterases 4 and 5 in inflammatory pain)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD.
REFERENCE(S): (1) Asomoza-Espinoza, R; Eur J Pharmacol 2001, V418, P195

(2) Beavo, J; Physiol Rev 1995, V75, P725 CAPLUS
(3) Cunha, F; Br J Pharmacol 1999, V127, P671 CAPLUS
(4) Denis, D; Eur J Pharmacol 1999, V367, P343 CAPLUS
(5) Dolan, S; Neurosci Lett 2001, V309, P157 CAPLUS
(6) Duarte, I; Eur J Pharmacol 1990, V186, P289 CAPLUS
(7) Ferreira, S; Prostaglandins 1979, V18, P191 CAPLUS
(8) IASP; Pain 1983, V16, P109
(9) Jain, N; Brain Res 2001, V909, P170 CAPLUS
(10) Jurna, I; Naunyn Schmiedebergs Arch Pharmacol 1984, V327, P23 CAPLUS
(11) Mixcoatl-Zecuatl, T; Eur J Pharmacol 2000, V400, P81 CAPLUS
(12) Moreland, R; Trends Endocrinol Metabol 1999, V10, P97 CAPLUS
(13) Ouseph, A; Neurosci 1995, V64, P769 CAPLUS
(14) Pyne, N; Biochem Soc Trans 1996, V24, P1019 CAPLUS
(15) Stacey, P; Biochem Biophys Res Commun 1998, V247, P249 CAPLUS
(16) Taiwo, Y; Neurosci 1989, V32, P577 CAPLUS
(17) Wheeler-Aceto, H; Psychopharmacol 1991, V104, P35 CAPLUS

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	35.53	35.74

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.46	-5.46

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jan 12, 2007 (20070112/UP).

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